Stormwater Pollution Prevention Plan (SWPPP)

For Construction Activities At:

Finca Sueño de Aurora
PR-413 Km 1.3 (Int.)
Barrio Ensenada
Rincón, PR 00677
(787) 983-7007

SWPPP Prepared For:

Sueño de Aurora, LLC (SDA)
Sr. Jorge Vaz
PO Box 366751
San Juan, PR 00936
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jvaz@bellagiocorp.com

SWPPP Prepared By:

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SWPPP Preparation Date:

March 2020

Estimated Project Dates:

Project Start Date: 03 / 08 / 2020
Project Completion Date: 03 / 08 / 2021

Contents

SECTION 1: SITE EVALUATION, ASSESSMENT AND PLANNING

1.1 Contact Information/Responsible Parties

Operator(s):

Aurora's Dream, LLC

Insert Company or Organization Name: Sueño de Aurora, LLC (SDA).
Insert Name: Jorge Vaz
Insert Address: PO Box 366751
Insert City, State, Zip Code: San Juan, PR 00936
Insert Telephone Number: (787) 983-7007
Insert Fax/Email: jvaz@bellagiocorp.com
Insert area of control (if more than one operator at site): Project Owner / Developer with control over construction plans and specifications.

Bellagio, LLC

Insert Company or Organization Name: Bellagio, Corp.
Insert Name: Jorge Vaz
Insert Address: PO Box 366751
Insert City, State, Zip Code: San Juan, PR 00936
Insert Telephone Number: 787-983-7007
Insert Fax/Email: jvaz@bellagiocorp.com
Insert area of control (if more than one operator at site): General Contractor in charge of construction operation including earthwork and compliance with CGP including implementation of SWPPP.

Subcontractor(s):

Insert Company or Organization Name:	
Insert Name:	
Insert Address:	
Insert City, State, Zip Code:	
Insert Telephone Number:	
Insert Fax/Email:	
Insert area of control (if more than one operator at site): IN APPENDIX	

See Subcontractor Certification Agreement in Appendix G.

1.2 Stormwater Team

Insert Role or Responsibility:	Decision-making, management, inspections, reports required by SWPPP, log sheets, SWPPP compliance documentation and ensure proper implementation of SWPPP / Contractor NOI Certifier
Insert Position:	Project Manager / Bellagio, Corp.
Insert Name:	Jorge Vaz
Insert Telephone Number:	787-983-7007
Insert Email:	amayol@bellagiocorp.com

Insert Role or Responsibility:	Decision-making, management / Sueño de Aurora, LLC (SDA) NOI Certifier
Insert Position:	Developer / Sueño de Aurora, LLC (SDA)
Insert Name:	Jorge Vaz
Insert Telephone Number:	787-983-7007
Insert Email:	jvaz@bellagiocorp.com

Insert Role or Responsibility:	BMPs installation and maintenance
Insert Position:	Construction Manager
Insert Name:	Carlos Luhring
Insert Telephone Number:	787-983-7007
Insert Email:	cluhring@bellagiocorp.com

Insert Role or Responsibility:	BMPs inspection
Insert Position:	Resident Inspector
Insert Name:	Xavier Cales
Insert Telephone Number:	787-677-3670
Insert Email:	xacales@cbengineeringllc.com>

Emergency 24-Hour Contact:

Company or Organization Name: Bellagio, Corp.
Name: Jorge Vaz
Telephone Number: 787-983-7007 / 787-359-0578

SECTION 2: SITE EVALUATION, ASSESSMENT AND PLANNING

2.1 Project/Site Information

Project Name and Address

Project/Site Name: Finca Sueño de Aurora
Project Street/Location: PR-413 Km. 1.3 (Int.), Ensenada Ward
City: Rincón
State: Puerto Rico
ZIP Code: 00677
County or Similar Subdivision: not applicable

Project Latitude/Longitude

(Use **one** of three possible formats, and specify method)

Latitude:
1. 18, 20, 58.57 N (degrees, minutes, seconds)

Longitude:
1. -67, 15, 36.10 W (degrees, minutes, seconds)

Method for determining latitude/longitude:
☐ USGS topographic map (specify scale_____)
☐ EPA Web site
☐ GPS
☒ Other (please specify): Google Earth

Additional Project Information

Is the project/site located on Indian country lands, or located on a property of religious or cultural significance to an Indian tribe? ☐YES ☒ NO

If yes, name the Reservation, or if not part of a Reservation, indicate "not applicable":
Not applicable

If you are conducting earth-disturbing activities in response to a public emergency, document the cause of the public emergency *(e.g., natural disaster, extreme flooding conditions)*, information substantiating its occurrence *(e.g., state disaster declaration)*, and a description of the construction necessary to reestablish effective public services:
Not applicable

Are you applying for permit coverage as a "federal operator" as defined in Appendix A of the CGP? ☐ Yes ☒ No

NPDES project or current permit tracking number*:
Sueño de Aurora, LLC (SDA): PRR_____; Bellagio, Corp.: PRR1000A9;
*(This is the unique identifying number assigned to your project by your permitting

authority after you have applied for coverage under the appropriate NPDES construction general permit. The Notice of Intent (NOI) should be filed through the EPA's Electronic NOI system (eNOI system) at www.epa.gov/npdes/storm water/cgpenoi).

2.2 Discharge Information

Does your project/site discharge stormwater into a Municipal Separate Storm Sewer System (MS4)? ☒ Yes ☐ No

Are there any surface waters that are located within 50 feet of your construction disturbances?

☐ Yes ☒ No

Table 1 – Names of Receiving Waters

Name(s) of the first surface water that receives stormwater directly from your site and/or from the MS4 (note: multiple rows provided where your site has more than one point of discharge that flows to different surface waters)
1. Punta Cadena to Punta Higuero Coastal (PRWC50)

Table 2 – Impaired Waters / TMDLs (Answer the following for each surface water listed in Table 1 above)

	Is this surface water listed as "impaired"?	If you answered yes, then answer the following:			
		What pollutant(s) are causing the impairment?	Has a TMDL been completed?	Title of the TMDL document	Pollutant(s) for which there is a TMDL
1	☒ YES	**Enterococci, Turbidity, Copper, Lead and Nickel**	☐ Yes ☒ No		

Describe the method(s) you used to determine whether or not your project/site discharges to an impaired water:
EPA My WATERS MAPPER.

Table 3 – Tier 2, 2.5, or 3 Waters (Answer the following for each surface water listed in Table 1 above)

	Is this surface water designated as a Tier 2, Tier 2.5, or Tier 3 water? (see Appendix F)	If you answered yes, specify which Tier (2, 2.5, or 3) the surface water is designated as?
1.	☒ YES	Tier 2

2.3 Nature and Sequence of the Construction Activity

General Description of Project

El Sueño de Aurora, LLC is owner of a land parcel of approximately 3.97 acres (4.088 cuerdas) located at Ensenada Ward in the Municipality of Rincón. El Sueño de Aurora, LLC is proposing the single-family housing development Finca Sueño de Aurora (the Project) occupying most of the land parcel.

This SWPPP presents the construction of the Project, a residential development of seven (7) single-family residential structures and future development area in the upper part of the property. The scope of work includes the installation of erosion and sediment control measures, clearing and grubbing, earthwork and grading, construction of a potable water system, sanitary sewer system, storm sewer system, electrical power and telecommunication lines, construction of an asphalt pavement road, and construction of residential structures. This Project does not contemplate any demolition.

The Project can be accessed through State Road PR-413 Km. 1.3 Interior and is bounded along the north and west by the remnant of Bienes Levy Cumpiano Community farm from which it was segregated, at the south by Milena Bogunovic and Sr. Harold Ball, and at the east by Gregg Fink and a municipal road.

As part of the Project, various construction support activities are required. These include excavation for slap, footing and utilities trench, borrow temporary deposit area, staging area, topsoil and vegetative/materials and construction materials storage areas. See the next section for a better description of the support activities and estimated areas.

Construction support activities (onsite and offsite construction support activities)

The construction support activities described below shall be identified in Appendix A:

- Staging area (on-site): includes the office and sanitary room, vehicles/equipment area, domestic trash collection, material storage area, products/chemical storage areas;
- Topsoil storage area (on-site);
- Vegetative waste storage area (on-site);
- Excavation Material temporary deposit area (on-site) when required;
- Construction material deposit area (on-site) when required.

Size of Construction Project

The following are estimates of the construction site (to the nearest quarter acre):

Size of property (acres)	3.97 ac
Total area of construction disturbances (acres)	2.8 ac
Maximum area to be disturbed at any one time (acres) including onsite and offsite construction support activities.	2.8 ac

Project Days of Operation: Mondays to Fridays

Project Hours of Operation: 7 am to 4 pm

Construction Sequence and Schedule of the Project:

This SWPPP includes a description of the intended sequence of construction activities including estimated start and end dates and duration of activities. It describes the installation of storm water control measures, earth disturbing activities, on site temporary/permanent cessation of construction activities, temporary or final stabilization of exposed soil areas, and removal of temporary storm water control measures, removal of construction equipment and control of potential pollutant generating activities.

Construction Sequence and Description of Major Activities Expected:

The construction shall begin on the south west portion of the site and then progress along north west. The site shall have sediment basins to collect runoff from a 3.97 acres drainage area. No more than 3.97 acres will be exposed at a time.

A. General conditions including mobilization, survey and implementation of safety and security plan.
B. Storm water control measures to prepare project site prior to commencing activities which could contaminate stormwater runoff (installation of silt fence, straw bales dikes at low ends and inlets, construction of temporary sediment basins, erosion control blanket protection at exposed steep slopes, others). Maps in Appendix A show the location of BMPs.
C. Clearing and grubbing to clear the site prior to major grading, cut and fill.

D. Earthwork cut and fill will include construction of roads used during construction, balancing and major grading to level site and site preparation.
E. Stormwater sewer system installation, sanitary and potable systems installation, utilities and infrastructure installation.
F. Construction of residences includes concrete and masonry works.
G. Construction of roads including pavement placement and concrete works for installation of curb and gutters, sidewalks and driveways.
H. Soil stabilization. See Section 4 for Erosion and Sediment Control best management practices and Section 9 for Final Stabilization best management practices.
I. Structures painting.
J. Removal of temporary storm water control measures, removal of construction equipment and cessation of pollutant generating activities.

Construction Schedule must include reflect stabilization deadlines per requirements.

Activity Description	Start Date (mm/dd/yyyy)	Finish Date (mm/dd/yyyy)	Duration (w)
General Conditions	12|1|20	11|1|21	12 Month
Mobilization	12|2|20	12|23|20	3 week
Survey	12|1|20	11|1|21	12 month
SOUTH SITE			
A. Stormwater Control Measures			
1. Install & Construct Stormwater Controls	11|15|20	12|1|20	15 days
2. Maintenance of Stormwater Controls	12|1|20	11|1|21	12 month
3. Final Stabilization & Remove Controls	2|2|21	6|1|21	4 Month.
B. Site Works			
1. Clearing and Grubbing	12|2|20	6|17|21	28 weeks
2. Cut and Fill Works	12|15|20	6|20|21	27 weeks
3. Detention Pond	2|8|21	2|12|21	1 week
4. Storm Sewer System	3|1|21	3|15|21	2 weeks
5. Sanitary Sewer System	7|1|21	8|10|21	6 weeks
6. Potable Water System	12|5|21	6|15|22	27 weeks
7. Curbs, Sidewalk and driveways	10|10|21	11|25|21	6 weeks
8. Concrete Pavement	2|15|22	3|15|22	4 weeks
C. Electrical & Telecommunication Works			
1. In-Site Works	6|15|21	7|30|21	6 weeks
D. Concrete and Masonry Works			
1. Concrete Structures (Dwelling Units)	4|10|21	12|20|21	36 weeks
2. Masonry Works (Dwelling Units)	10|15|21	1|15|22	13 weeks
NORTH SITE			
A. Stormwater Control Measures			

1. Install & Construct Stormwater Controls			
2. Maintenance of Stormwater Controls			
3. Final Stabilization & Remove Controls			
B. Site Works			
1. Clearing and Grubbing			
2. Cut and Fill Works			
3. Detention Pond			
4. Storm Sewer System			
5. Sanitary Sewer System.			
6. Potable Water System.			
7. Curbs, Sidewalk and driveways			
8. Concrete Pavement			
C. Electrical & Telecommunication Works			
1. In-Site Works			
D. Concrete and Masonry Works			
1. Concrete Structures (Dwelling Units)			
2. Masonry Works (Dwelling Units)			

NOTE: THE CONTRACTOR SHALL KEEP RECORDS OF THE MODIFIED SCHEDULE AS MAJOR CHANGES OCCUR ON-SITE.

Changes to the programmed schedule shall be recorded in Appendix H and include the following:

- Estimated start and end dates of construction disturbances associated with this phase (includes clearing & grubbing, mass grading, site preparation, final grading, creation of soils & vegetative waste stockpiles requiring stabilization)
- For each stormwater control, insert estimated date(s) of installation of each stormwater control
- Cessation temporarily or permanently of construction activities on site or in designated portions of the site, insert estimated date(s).
- For areas of the site required to be stabilized, insert estimated date(s) of application of stabilization measures (final & temporary stabilization of areas of exposed soil). Dates must reflect the applicable deadlines per “Section 9 Final Stabilization” of this SWPPP.
- Insert estimated date(s) when stormwater controls will be removed.

2.4 Potential Pollutants and Pollution Sources

The principal pollutant that this project will generate is sediment, mostly from earth work activities. Other pollutants can be generated in minor amounts from accidental spills and leaking from construction equipment and material storage areas. Also, although minimal, landscaping activities, including clearing, weed control, and planting, have the potential to cause erosion and generate pollutants such as sediments, herbicides, pesticides, and fertilizers (nutrients).

Table 5 on the following page summarizes the potential sources of sediment and other pollutants likely to be found at the site during construction activities.

Table 5. Potential Pollutants and Sources

Activities and potential sources of pollutants	Pollutants								
	Sediments	Nutrients	Heavy Metals	pH (acid and bases)	Pesticides and Herbicides	Oil and Greases	Bacteria and Viruses	Trash, Debris, Solids	Other Toxic Chemicals
Clearing, grading, excavating, and unstabilized areas	X	X						X	
Paving operations	X					X		X	
Applicators & containers washing			X	X				X	
Structure construction, painting, cleaning		X		X				X	X
Dewatering operations	X	X							
Material storage area	X	X	X	X	X	X		X	X
Material for building process		X	X	X	X	X		X	X
Solid wastes (trash and debris)								X	X
Landscaping activities	X	X			X			X	
Hazardous wastes storage			X	X	X	X			X
Contaminated spills		X	X	X	X	X			X
Sanitary waste area							X		X
Vehicle/equipment use and storage	X					X			X
Vehicle/equipment fueling and maintenance (offsite)						X			X
Parking areas	X					X		X	X
Landscape operations	X	X						X	

Table 6 includes information regarding material type, chemical and physical description, and the specific regulated storm water pollutants.

Table 6. Potential Construction Site Pollutants

Trade Name Material	Chemical/Physical Description[1]	Storm Water Pollutants[1]
Pesticides (insecticides, fungicides, herbicides, rodenticides)	Various colored to colorless powder, pellets, or grains	Chlorinated hydrocarbons, organophosphates, carbamates, arsenic
Fertilizer	Liquid or solid grains	Nitrogen, phosphorous
Plaster	White granules or powder	Calcium sulphate, calcium carbonate, sulfuric acid
Cleaning solvents	Colorless, blue, or yellow-liquid	Perchloroethylene, methylene chloride, trichloroethylene, petroleum distillates
Asphalt	Black solid	Oil, petroleum distillates
Concrete	White solid	Limestone, sand
Glue, adhesives	White or yellow liquid	Polymers, epoxies
Paints	Various colored liquid	Metal oxides, stoddard solvent, talc, calcium carbonate, arsenic
Curing compounds	Creamy white liquid	Naphtha
Wastewater from construction equipment washing	Water	Soil, oil & grease, solids
Wood preservatives	Clear amber or dark	Stoddard solvent, petroleum distillates, arsenic, copper, chromium
Hydraulic oil/fluids	Brown oily petroleum	Mineral oil
Gasoline	Colorless, pale brown petroleum hydrocarbon	Benzene, ethyl benzene, toluene, xylene, MTBE
Diesel Fuel	Clear, blue-green to yellow liquid	Petroleum distillate, oil & grease, naphthalene, xylenes
Kerosene	Pale yellow liquid petroleum hydrocarbon	Coal oil, petroleum distillates
Antifreeze/coolant	Clear green/yellow	Ethylene glycol, propylene glycol, heavy metals (copper, lead, zinc)
Erosion	Solid Particles	Soil, Sediment

(1) Data obtained from MSDSs when available

2.5 Soils, Slopes, Vegetation and Current Drainage Patterns.

Soil type(s):

Site Condition: The Project will be developed in unmanaged/unimproved pastureland. non-developed land parcels. Two soil types are found in the Project site: Malaya arcilloso (McF2), and Montegrande arcilloso (Mvc). McF2 has a 20% to 60% slope with good drainage. Mvc has a 2% to 12% slope, with a high moisture retention capacity. Soil sampling points on site confirmed this. Also, a significant amount of sediment was found over native soil.

Slopes:

The topography of the project area is mainly leveled and semi leveled with an average elevation of 40 meters above mean sea level (amsl).

Hydrology & Drainage Patterns:

There are no hydrographic features on the project grounds. The nearest hydrographic system is the Quebrada Ensenada, which runs southeast of the Project site. At its nearest point, the area to be developed is located approximately 225 meters from the Quebrada Ensenada. However, the proposed site locates outside the area of uptake of that body of water.

Currently, there are not stormwater systems inside its perimeter and the runoff drains according to the topography from the center through the property towards the west, south and east, reaching the lateral gutters on PR-413 which discharge into a culvert that crosses the PR-413 to the west.

During construction, all runoff will be controlled superficially inside the project site to minimize sediment that can be carried by runoff outside of the property.

During proposed conditions, the project will collect the runoff keeping the drainage existing conditions and following the corresponding regulatory requirements by considering measures for promoting self-sustainability work developments. Self-sustainability measures, runoff harvesting, and reuse measures will be incorporated for maintenance activities at the Project and its green areas.

Vegetation:

The project area is mostly covered by vegetation including unmanaged pastures and small trees. During the Flora and Fauna field study performed, flora species considered critical, threatened or endangered were not found. Prior to the construction stage, a Trees Inventory will be executed and a Trees Mitigation Plan will be developed to compensate for the removal of these in compliance with local regulations.

Wetlands:

According to the National Wetland Inventory (NWI) no wetlands are shown within the study area.

Impervious percentages estimates before and after construction

The following are estimates at the construction site:

Percentage impervious area before construction	0%
Runoff coefficient before construction	85
Percentage impervious area after construction	40%
Runoff coefficient after construction	85

2.6 Natural Buffers

The project site is not bordered by any reaches and creeks. A buffer zone composed of existing vegetation of at least 50 feet, will be maintained. The following BMPs will be implemented to avoid and minimize impacts:

- Stockpiles or land clearing debris piles will be located outside of any natural buffer or sensitive area such as wetlands or vegetated areas to be preserved.
- Silt fences and hay bales
- Catch basin sediment control straw bale dikes
- Proper management of materials and wastes
- Spill prevention and control measures
- Seeding and erosion control blankets or other geotextiles to stabilize disturbed areas.

2.7 Allowable Non-Stormwater Discharges

Table 4: List of Allowable Non-Stormwater Discharges Present at the Site

Type of Allowable Non-Stormwater Discharge	**Likely to be Present at Your Site?**
Discharges from emergency fire-fighting activities	☐ YES ☒ NO
Fire hydrant flushings	☐ YES ☒ NO
Landscape irrigation	☐ YES ☒ NO
Waters used to wash vehicles and equipment (only tire washing) See BMP: 4.5 Tire Wash; 4.12 Sediment Basin	☒ YES ☐ NO
Water used to control dust See BMP: 4.7 BMP Dust Control	☒ YES ☐ NO
Potable water including uncontaminated water line flushings (not likely). See BMP: 5.4 Non-stormwater discharges	☒ YES ☐ NO
Routine external building wash down See BMP: 5.4 Non-stormwater discharges	☒ YES ☐ NO
Pavement wash waters See BMP: 4.11 Protect Storm Drain Catch Basins	☒ YES ☐ NO
Uncontaminated air conditioning or compressor condensate See BMP: 5.4 Non-stormwater discharges	☒ YES ☐ NO
Uncontaminated, non-turbid discharges of ground water or spring water	☐ YES ☒ NO
Foundation or footing drains	☐ YES ☒ NO
Construction dewatering water	☐ YES ☒ NO

2.8 Construction Sign & Site Maps

You must comply with the requirement to post a notice of your permit coverage per the 2017 CGP Part 1.5. At a minimum the sign must include the following:

1. The NPDES ID (NOI permit tracking number)
2. Contact for obtaining additional construction site information: Jorge Vaz (jvaz@bellagiocorp.com) 787-983-7007.
3. "If you would like to obtain a copy of the Storm water Pollution Prevention Plan (SWPPP) for this site, contact the EPA Regional Office at Mr. Sergio Bosques (bosques.sergio@epa.gov) 787-977-5838."
4. "If you observe indicators of storm water pollutants in the discharge or in the receiving waterbody, contact the EPA through the following website: https://www.epa.gov/enforcement/report-environmental-violations."

The SWPPP Site Maps are included in Appendix A and must comply with Part 7.2.4.

These maps must include the following features:

- Property boundaries,
- Locations where construction will occur, including:
  - ✓ Earth-disturbing activities, noting any phasing of construction activities;
  - ✓ Demolition Activities;
  - ✓ Approximate slopes before and after major grading activities. Note areas of steep slopes, as defined in Appendix A;
  - ✓ Sediment, soil, or other construction material stockpiles;
  - ✓ Crossings of surface waters;
  - ✓ Designated points where vehicles will exit onto paved roads;
  - ✓ Structures and other impervious surfaces upon completion of construction; and
  - ✓ Construction support activity areas covered by this permit.
- Surface waters, within one mile downstream of site's discharge point.
- Identify impaired water bodies; identify as Tier 2, 2.5, or 3.
- Boundary lines of any natural buffer areas.
- Areas of federally-listed critical habitat for endangered or threatened species. (N/A)
- Type and extent of preconstruction cover on site (e.g., vegetative cover, forest, pasture, pavement, structures);
- Drainage pattern(s) of stormwater and authorized non-stormwater before and after major grading activities;
- Stormwater and authorized non-stormwater discharge locations, including:
  - ✓ Storm drain inlets on the site discharging to;

- ✓ Locations where stormwater or allowable non-stormwater will be discharged directly to waters of U.S.

– Potential pollutant-generating activities.
– Stormwater control measures.
– Locations where polymers, flocculants, or other treatment chemicals will be used and stored. (N/A)

NOTE:
THE CONTRACTOR SHALL MODIFY THE SITE MAPS AS REQUIRED TO REFLECT ANY CHANGES IN THE LOCATION OF ANY INFORMATION AND/OR AREA IDENTIFIED ABOVE.

SECTION 3: DOCUMENTATION OF COMPLIANCE WITH OTHER FEDERAL REQUIREMENTS

3.1 Endangered Species Protection

Eligibility Criterion

Under which criterion listed in Appendix D are you eligible for coverage under this permit?

☐ **A** ☐ **B** ☒ **C** ☐ **D** ☐ **E**

For reference purposes, the eligibility criteria listed in Appendix D are as follows:

Criterion C. Discharges not likely to adversely affect ESA-listed species and/or designated critical habitat. Federally-listed threatened or endangered species or their designated critical habitat(s) are likely to occur in or near your site's "action area", as defined in Appendix A of the permit.

The IPaC database and the MNFS GIS maps were used to validate the species that may occur within the project area. IPaC database has indicated no critical habitat within the project area and no species were identified in the NMFS species maps.

Supporting Documentation

See Attachments in Appendix K:

1. The USFWS dated April 7, 2020 did not mention existence of threatened and endangered species and their habitats in the proposed project site.
2. Include the Habitat Categorization Certification from the Department of Natural & Environmental Resources (DNER) date June 19, 2018.
3. Include the Technical Memorandum performed by Ambienta Inc. dated June 2018.
4. EQB Compliance Determination Letter #2018-239609-DEA-002888 date August 1, 2019.

The Official Species list from the USFWS lists one (1) endangered species, the Puerto Rican Boa. However, the USFWS indicates there are no critical habitats within the project area.

3.2 Historic Preservation

Appendix E, Step 1

Do you plan on installing any of the following stormwater controls at your site? Check all that apply below, and proceed to Appendix E, Step 2.

- ☐ Dike
- ☐ Berm
- ☒ Catch Basin
- ☐ Pond
- ☒ Stormwater Conveyance Channel (e.g., ditch, trench, perimeter drain, swale, etc.)
- ☒ Culvert
- ☒ Other type of ground-disturbing stormwater control: storm sewer pipes, headwalls.

Appendix E, Step 2

If yes in Step 1, have prior surveys or evaluations conducted on the site already determined that historic properties do not exist, or that prior disturbances at the site have precluded the existence of historic properties? ☒ YES ☐ NO

The National Register Information System available from the National Park Service, National Register of Historic Places at www.nps.gov/nr/ indicates there are no registered or pending historic properties on site as of June, 2018.

The Puerto Rico Culture Institute (ICP) Division of Archeology and Historic Conservation endorsed the project with no objections. See ICP documents attached in Appendix L.

3.3 Safe Drinking Water Act Underground Injection Control Requirements

Do you plan to install any of the following controls? NO

Check all that apply below.

- ☐ Infiltration trenches (if stormwater is directed to any bored, drilled, driven shaft or dug hole that is deeper than its widest surface dimension, or has a subsurface fluid distribution system)
- ☐ Commercially manufactured pre-cast or pre-built proprietary subsurface detention vaults, chambers, or other devices designed to capture and infiltrate stormwater flow
- ☐ Drywells, seepage pits, or improved sinkholes (if stormwater is directed to any bored, drilled, driven shaft or dug hole that is deeper than its widest surface dimension, or has a subsurface fluid distribution system)

SECTION 4: EROSION AND SEDIMENT CONTROLS

This section includes a description of the erosion and sediment controls and measures that will be implemented during construction as well as controls and measures that will operate after construction is complete. There are several principles for controlling erosion and sedimentation. This plan utilizes these principles to the degree practicable and in conjunction with the objectives of the construction activities. The Permittee has the responsibility to incorporate the specifications of this plan into practice and to apply the principles of erosion and sedimentation control (ESC) to prevent storm water pollution. The principles of erosion and sedimentation (ESC) control are:

1. Minimize disturbed area and protect natural features and soil
2. Phase construction activity
3. Control storm water flowing onto and through the project
4. Stabilize soils promptly
5. Protect slopes
6. Protect storm drain catch basins
7. Establish perimeter controls
8. Retain sediment on-site and control dewatering practices
9. Establish stabilized construction exits
10. Inspect and maintain controls

Storm water measures that control discharges from the initial site clearing, grading, excavating and other earth-disturbing activities (natural buffers, perimeter control, exit point controls, etc.) will be installed and operational by the time each phase of earth-disturbing activities in any given portion of the site has begun. All storm water controls shall be installed in accordance with good engineering practices and applicable specifications.

4.1 Natural Buffers or Protection of Sensitive Areas

Are there any surface waters within 50 feet of your project's earth disturbances?
☐ YES ☒ NO

Check the compliance alternative that you have chosen:

☒ I will provide and maintain a 50-foot undisturbed natural buffer.

☐ I will provide and maintain an undisturbed natural buffer that is less than 50 feet and is supplemented by additional erosion and sediment controls, which in combination achieves the sediment load reduction equivalent to a 50-foot undisturbed natural buffer.

☐ It is infeasible to provide and maintain an undisturbed natural buffer of any size, therefore I will implement erosion and sediment controls that achieve the sediment load reduction equivalent to a 50-foot undisturbed natural buffer.

☐ I qualify for one of the exceptions.

However, the following controls are implemented to protect the sensitive areas near the project area:

- Prior to commencing earth disturbing activities on the site, the construction impact limits are marked on-site with silt fence to ensure no passing of construction equipment or personnel.
- The site map shows how all discharges from the construction disturbances will first be treated by the site's erosion and sediment controls.
- Earth ditches or channels will be constructed within the site to direct runoff to the temporary sediment basins and permanent detention basin at the low ends of the Project.

In addition, temporary sediment basins will be installed during construction activities. The Contractor will construct drainage channels before stripping vegetation.

OPERATORS must ensure all discharges are treated to prevent erosion in stormwater. See Appendix A - Drainage Maps, for approximate location and details.

4.2 Phase Construction Activity [Perimeter Controls]

BMP Description:	Buffer Zone Delimitation. Prior to commencing earth disturbing activities on the site, the construction limit must be delineated with silt fence to protect the natural buffer area and prevent soil erosion and stop sediment from leaving the site.
Installation Schedule:	Before any construction activity.
Maintenance and Inspection:	Inspect silt fences regularly and frequently, as well as after each rainfall event, to make sure that they are intact and that there are no gaps where the fence meets the ground, or tears along the length of the fence. If gaps or tears are found, repair or replace immediately. Remove accumulated sediments from the fence base when the sediment reaches one-third to one half of the fence height. Remove sediment more frequently if accumulated sediment is creating noticeable strain on the fabric to protect it from failure due to a sudden storm event. Monitor daily during prolonged rain events. When you remove the controls remove the accumulated sediment as well.
Responsible Staff:	C̄arlos Luhring

4.3 Control storm water flowing onto and through the Project

BMP Description:	Grading. Grading and swales used to convey runoff to protected storm water structures and sedimentation basins. Gabions and/or erosion control blankets will be used across any swales and straw bale dikes or gabions surrounding storm sewer structures to protect from sedimentation.
Installation Schedule:	Before any construction activity.
Maintenance and Inspection:	Remove trash and debris accumulated. Remove sediment build-up once it has accumulated to 25 percent of the original design volume. Replace erosion control blanket where damaged or missing.
Responsible Staff:	Carlos Luhring

4.4 Perimeter Controls

BMP Description:	Silt Fences. Silt fences shall be installed around the perimeter of work areas including trench and structure excavations and backfilling activities) to help prevent soil erosion and stop sediment from leaving the site. Install controls on the down-slope perimeter of your project (it is often unnecessary to surround the entire site with hay bale barriers or fiber rolls). Silt fence will be placed along all perimeter excavation areas that drain away from disturbed surfaces, at the bottom and sides of disturbed slopes and around natural resource areas.
Installation Schedule:	During construction activity.
Maintenance and Inspection:	Inspect regularly and frequently, as well as after each rainfall event, to make sure that they are intact and that there are no gaps where the fence meets the ground, or tears along the length of the fence. If gaps or tears are found, repair or replace immediately. Remove accumulated sediments from the fence base when the sediment reaches one-third to one half of the fence height. Remove sediment more frequently if accumulated sediment is creating noticeable strain on the fabric to protect it from failure due to a sudden storm event. Monitor daily during prolonged rain events. When you remove the fiber roll, remove the accumulated sediment as well.
Responsible Staff:	Carlos Luhring

4.5 Stabilized Construction Exits

BMP Description:	Stabilized Construction Entrance/Exit. Stabilize construction entrance by installing a pad of crushed stone at any point where traffic enters or leaves the construction site. A stabilized construction entrance is intended to reduce off-site sedimentation by eliminating the tracking or flowing of sediment onto public rights-of-way. The traffic shall be limit to properly constructed and stabilized entrances within the project area. The entrance shall be located to minimize the impact to streams and storm drains. All sediment spilled, dropped, washed or tracked onto public rights-of-way shall be removed immediately. Only one entrance/exit will be allowed during construction activities.
Installation Schedule:	Before any construction activity.
Maintenance and Inspection:	Inspect weekly and after each rainfall. Stir aggregate with backhoe on a weekly basis or as required based on construction activity. Maintain the gravel pad in a condition to prevent mud or sediment from leaving the construction site. Replace gravel material when surface voids are visible.
Responsible Staff:	Carlos Luhring

BMP Description:	Tire Washing. When necessary, wheels shall be cleaned to remove sediments prior to entrance into public right of way. Washing shall be conducted in stabilized areas with crushed stones which drain into appropriate sediment traps or basins. All sediment shall be prevented from entering any storm drain, ditch or water course through the use of sand bags, gravel, boards or other approved methods. No discharges of soaps, solvents, or detergents will be allowed.
Installation Schedule:	Before any construction activity
Maintenance and Inspection:	Inspect and verify that the vehicle wash areas are in place prior to the commencement of associated activities. While activities associated with the vehicle wash areas are under way, inspect weekly during the rainy season and of two-week intervals in the non-rainy season.
Responsible Staff:	Carlos Luhring

4.6 Stockpiled Sediment or Soils

BMP Description:	Silt Fence and Geotextile Cover: Silt fence and geotextile covers will be used to help control erosion of soil and backfill stockpiling and debris piles from earthwork and excavation material. Silt fence shall be installed surrounding the perimeter of the soil stockpiling and debris piles and covered with a geotextile cover to control the erosion and sedimentation from rainfall and wind when not in use.
Installation Schedule:	During construction activities.
Maintenance and Inspection:	Inspect controls regularly and frequently, as well prior to forecast rain, daily during extended rain events, after rain events, weekly during the rainy season, and at two-week intervals during the non-rainy season to make sure that they are intact. Remove accumulated sediments from silt fence when the sediment reaches one-third the fence height. Remove sediment more frequently if accumulated sediment is creating noticeable strain on the silt fence and it might fail from a sudden storm event. Monitor silt fence daily during prolonged rain events. Stockpiles shall be covered with the geotextile covers while material is not in use, during rain events, and at the end of each day. Silt fence shall be removed when it has served their usefulness so as not to block or impede storm flow or drainage. When you remove controls, remove the accumulated sediment as well.
Responsible Staff:	Carlos Luhring

4.7 Minimize Dust

BMP Description:	Dust Control. Dust control is the reducing of surface and air movement of dust during construction activities. The purpose of dust control is to prevent the air movement of sediments to off-site areas or other on-site areas without sediment control where they could subsequently be washed into surface waters. Dust control should be planned in association with earthmoving/site grading, excavation activities and areas with frequent construction traffic. Dust control measures may include: sprinkling/irrigation, vegetative cover, and mulching.
Installation Schedule:	All bare ground will be irrigated with water twice a day or more frequently as needed to control dust.
Maintenance and Inspection:	The site should be observed daily for evidence of windblown dust and reasonable steps should be taken to reduce dust whenever possible. When construction on a site is inactive for a period, the site should be inspected at least weekly for

	evidence of dust emissions or previously windblown sediments.
Responsible Staff:	Carlos Luhring

4.8 Protect Steep Slopes

BMP Description:	Vegetation cover and Silt fences. Steep slopes are expected in the site. Earth disturbing activities shall be minimized at steep slopes. Where disturbed protect with the use of silt fence. The material for silt fences should be a pervious sheet of synthetic fabric such as polypropylene, nylon, polyester, or polyethylene yarn. Slopes greater than (4:1) (H:V) shall be protected by an appropriate type of vegetation cover. Vegetation cover shall follow the BMP for ***Stabilize Soils Promptly***.
Installation Schedule:	During construction activities.
Maintenance and Inspection:	Inspect silt fences regularly and frequently, as well as after each rainfall event, to make sure that they are intact and that there are no gaps where the fence meets the ground or tears along the length of the fence. If gaps or tears are found, repair or replace the fabric immediately. Remove accumulated sediments from the fence base when the sediment reaches one-third to one-half the fence height. Remove sediment more frequently if accumulated sediment is creating noticeable strain on the fabric and the fence might fail from a sudden storm event. When you remove the silt fence, remove the accumulated sediment as well.
Responsible Staff:	Carlos Luhring

4.9 Preserve Topsoil

BMP Description:	Preserve Topsoil. Topsoil removed during earthwork activities shall be stockpiled on site for later use in landscaping activities. Silt fence and geotextile covers will be used to help control erosion of soil and backfill stockpiling and debris piles from earthwork and excavation material. Silt fence shall be installed surrounding the perimeter of the soil stockpiling and debris piles and covered with a geotextile cover to control the erosion and sedimentation from rainfall and wind.
Installation Schedule:	During construction activities
Maintenance and	Inspect silt fence and geotextile covers regularly and

Inspection:	frequently, as well prior to forecast rain, daily during extended rain events, after rain events, weekly during the rainy season, and at two-week intervals during the non-rainy season to make sure that they are intact. Remove accumulated sediments from silt fence when the sediment reaches one-third the roll height. Remove sediment more frequently if accumulated sediment is creating noticeable strain on the silt fence and it might fail from a sudden storm event. Monitor silt fence daily during prolonged rain events. Stockpiles shall be covered with the geotextile covers while material is not in use, during rain events, and at the end of each day. Silt fence shall be removed when it has served their usefulness so as not to block or impede storm flow or drainage. When you remove the silt fence, remove the accumulated sediment as well.
Responsible Staff:	Carlos Luhring

4.10 Soil Compaction

BMP Description:	In areas where final vegetative stabilization will occur or where infiltration practices will be installed, controls, will be used to restrict vehicle or equipment access or condition the soil for seeding or planting to support vegetative growth, if necessary and feasible. Final vegetative stabilization shall begin immediately where construction activities have permanently ceased or will be temporarily inactive for 14 or more calendar days.
Installation Schedule:	Prior to final vegetation stabilization.
Maintenance and Inspection:	Inspection of soils prior to final vegetative stabilization to evaluate the condition the soil for seeding or planting to support vegetative growth, if necessary and feasible. Final vegetative stabilization shall occur according to the applicable specifications for planting and maintenance. Inspect weekly to confirm germination and healthy growth of vegetation.
Responsible Staff:	Carlos Luhring

4.11 Protect Storm Drain Catch Basins and Yard Drains

BMP Description:	Straw Bales, Fiber Rolls or Filter Fabric. All existing and new inlets and catch basins shall be protected from sedimentation by means of straw bale, fiber rolls or filter fabric surrounding the perimeter of the storm water structure.
Installation Schedule:	Before construction activity for existing and during construction activity for proposed.
Maintenance and Inspection:	Inspect straw bales, fiber rolls and filter fabric regularly and frequently, as well prior to forecast rain, daily during extended rain events, after rain events, weekly during the rainy season, and at two-week intervals during the non-rainy season to make sure that they are intact and that they are intact and that the straw bales, fiber rolls are not crushed or damaged by equipment traffic, or there are no gaps where the straw bale dikes meets the ground. If gaps are found, repair or replace immediately. Remove accumulated sediments from the base when the sediment reaches one-third the straw bale, fiber roll height. Remove sediment more frequently if accumulated sediment is creating noticeable strain on the control measure to protect it from failure due to a sudden storm event. Monitor daily during prolonged rain events. Controls shall be removed when they have served their usefulness so as not to block or impede storm flow or drainage. When you remove the controls, remove the accumulated sediment as well.
Responsible Staff:	Carlos Luhring

BMP Description:	Filter Fabric at yard drains. All yard drains shall be protected from sedimentation by means of filter fabric placement over the inlet of the storm water structure.
Installation Schedule:	Before any construction activity
Maintenance and Inspection:	Inspect filter fabric regularly and frequently, as well prior to forecast rain, daily during extended rain events, after rain events, weekly during the rainy season, and at two-week intervals during the non-rainy season to make sure that they are well placed, not damaged by equipment traffic. If damage is found, repair or replace immediately. Remove accumulated sediments frequently. Monitor daily during prolonged rain events. Control shall be removed when it has served its usefulness so as not to block or impede storm flow or drainage. When you remove the control, remove the accumulated sediment as well.
Responsible Staff:	Carlos Luhring

4.12 Retain Sediment On-site and Control Dewatering Practices

BMP Description:	Temporary Sediment Traps and Sediment Basins. Sediment traps or basins allow sediment to settle out of construction runoff from dewatering activities before discharge. Sediment traps detain sediments in storm water runoff and from dewatering activities to protect receiving waters, and the surrounding area. The sedimentation traps are formed by excavating an area or by placing an earthen embankment across a low area or drainage swale. Runoff from dewatering activities shall not be discharged directly on the pavement. Locate at least as shown on plans per details.
Installation Schedule:	Before any construction activity.
Maintenance and Inspection:	The primary maintenance consideration for temporary sediment traps is removing accumulated sediment. Do this periodically to ensure that the basin continues to operate effectively. Remove sediments when the basin reaches about 2/3 sediment capacity. Inspect the sediment basin after each rainfall event to ensure that the basin is draining properly. Also check the structure for damage from erosion.
Responsible Staff:	Carlos Luhring

4.13 Stabilize Soils Promptly

BMP Description:	Temporary Seeding. Temporary seeding uses rapid growing grass to stabilize disturbed areas that have not reached final grade. The area shall be protected from excess runoff as necessary with diversions or berms. Plant species shall be selected on the basis of quick germination, growth, and time of year to be seeded. Fertilizer, lime, seedbed preparation, seed coverage, mulch, and irrigation shall be used as necessary to promote quick plant growth. May be used combined with erosion control blankets, specifically on slopes.
Installation Schedule:	Begin stabilization to exposed soils immediately after cessation of construction activities or if area will be inactive for 14 calendar days or more. Complete stabilization 14 calendar days after stabilization has initiated. Stabilization will be obtained through means of seeding and mulch.
Maintenance and Inspection:	Water the soil until the grass is firmly established. Inspect frequently during the first 6 weeks for appropriate moisture levels and stands that are uniform and dense.
Responsible Staff:	Carlos Luhring

4.14 Stormwater Drainage Ditches

BMP Description:	Stormwater drainage ditches. Stormwater drainage ditches shall be constructed to divert runoff from disturbed areas to a sediment-trapping facility such as a sediment trap or sediment basin. The drainage ditches must maintain a positive grade to ensure drainage, however, not too great to prevent erosion due to high velocity flow. The ditch shall be stabilized by means of temporary or permanent vegetation, through the use of hay bale barriers crossing the ditch separated from each other as needed, an erosion control blanket or a combination to prevent erosion of the ditch itself.
Installation Schedule:	Installed as a first step in the land disturbing activity and must be functional prior to upslope land disturbance.
Maintenance and Inspection:	Inspect weekly, after every storm and repairs made to the ditch as needed. Damages caused by construction traffic or other activity must be repaired before end of the working day.
Responsible Staff:	Carlos Luhring

SECTION 5: POLLUTION PREVENTION MEASURES

5.1 Storage, Handling and Disposal of Construction Products, Materials, and Wastes

The material handling and waste management BMPs described herein are aimed to reduce the potential for stormwater runoff to pick up construction site wastes and discharge them to surface waters.

BMP Description:	Construction waste, debris and trash management. Proper management and disposal of wastes should be practiced at all times. A waste storage area is designated for vegetative as shown on plans. The waste collection area will be located in an area that does not receive a substantial amount of runoff and does not drain directly to a water body and protected with silt fence surrounding the stockpile as shown on plans. Debris and trash will be kept under cover in a closed dumpster or other enclosed trash container that limits contact with rain and runoff and prevents light materials from blowing out. Do not allow waste materials to accumulate on the ground. Prohibit littering by workers and visitors. Wastes will be collected on a regular basis and hauled to the approved landfill, recycled materials will be separated and hauled to the approved recycling facility.
Installation Schedule:	Before any construction activity
Maintenance and Inspection:	Waste collection area will be inspected weekly and immediately after storm events.
Responsible Staff:	Carlos Luhring

BMP Description:	Non hazardous materials and wastes management. All non-hazardous and waste materials, such as, fertilizers, pesticides, herbicides, insecticides, landscape materials and chemical additives, will be stored, managed, and disposed of as required in compliance with all application and disposal required included on the registered product label. The contractor will follow good housekeeping practices throughout the project to ensure compliance with the requirements of the regulations. Site personnel are to be instructed in these practices and site construction management will be responsible for seeing

	that the practices are followed. Non-hazardous waste materials will be stored in appropriate and clearly marked containers and segregated from non-hazardous construction site debris. Secondary containment (berms) will be provided for all waste materials in the hazardous materials storage area and in fueling and maintenance areas and where the potential for spills is high.
Installation Schedule:	Once the site materials storage area has been installed.
Maintenance and Inspection:	The waste material storage areas will be inspected weekly and after storm events.
Responsible Staff:	Carlos Luhring

BMP Description:	Paints, solvents, fuel, oils, hydraulic fluids, petroleum products and other chemicals. All such as paints, solvents, fuel, oils, hydraulic fluids, petroleum products and chemical additives will be stored, managed, and disposed of as required by OSHA and EPA. The contractor will follow good housekeeping practices throughout the project to ensure compliance with the requirements of the regulations. Site personnel are to be instructed in these practices and site construction management will be responsible for seeing that the practices are followed. Products will be stored in appropriate and clearly marked containers and segregated from construction site debris. Secondary containment (berms) will be provided for all waste materials in the hazardous materials storage area and in fueling and maintenance areas and where the potential for spills is high.
Installation Schedule:	Once the site materials storage area has been installed.
Maintenance and Inspection:	The hazardous waste material storage areas will be inspected weekly and after storm events.
Responsible Staff:	Carlos Luhring

BMP Description:	Hazardous materials management. All products will be stored, managed, and disposed of as required by OSHA and EPA in compliance with the hazardous waste regulations. The contractor will follow good housekeeping practices throughout the project to ensure compliance with the requirements of the regulations. Site personnel are to be instructed in these practices and site construction management will be responsible for seeing that the practices are followed. Hazardous waste materials will be stored in appropriate and clearly marked containers and segregated from non-hazardous construction site debris. Secondary containment (berms) will be provided for all waste materials in the hazardous materials storage area and in fueling and maintenance areas and where the potential for spills is high.
Installation Schedule:	Once the site materials storage area has been installed.
Maintenance and Inspection:	The hazardous waste material storage areas will be inspected weekly and after storm events.
Responsible Staff:	Carlos Luhring

BMP Description:	Sanitary and septic waste management. Portable toilets will be provided for the collection of sanitary waste at the project site. Portable toilets will be regularly serviced by a private carrier and wastes will be disposed of in a waste water treatment facility.
Installation Schedule:	Portable toilets will be installed during mobilization activities to the site and set-up of project offices
Maintenance and Inspection:	The portable toilets will be inspected weekly for evidence of leaking holding tanks. Toilets with leaking holding tanks will be removed from the site and replaced with new portable toilets.
Responsible Staff:	Carlos Luhring

5.2 Spill Prevention Plan

BMP Description:	Spill Prevention and Control Measures Appropriate spill prevention and control measures provisions will be implemented as necessary during construction activities in order to reduce the risks of oils spills or other accidental exposure of materials and substances to the storm water runoff. Information on spill prevention and cleanup procedures will be kept on site and distributed among construction personnel. Persons trained in spill handling will be available on site or on call at all times. Materials for cleaning up spills will be readily available on site. In the unlikely event of a release, all spills will be promptly cleaned up and spill materials properly dispose. Significant spills shall be reported to pertinent agencies.
Installation Schedule:	Once construction activities initiate.
Maintenance and Inspection:	Daily inspection of storage and refueling areas and any active construction area where spills may occur.
Responsible Staff:	Carlos Luhring

5.3 Offsite Washing of Equipment/Vehicles and Allowable Non-Storm water Discharges

BMP Description:	Off-site equipment/vehicle washing. All equipment and vehicle washing will be performed off-site except for truck wheels washing (as needed) in the project site exit to reduce off-site sedimentation by eliminating the tracking or flowing of sediment onto public rights-of-way. Proper runoff control measures will be implemented at the washing station.
Installation Schedule:	Before construction
Maintenance and Inspection:	**Inspect weekly and after each rainfall.** Stir aggregate with backhoe on a weekly basis or as required based on construction activity. Maintain the gravel pad in a condition to prevent mud or sediment from leaving the construction site. Replace gravel material when surface voids are visible.
Responsible Staff:	Carlos Luhring

BMP Description:	Allowable non-stormwater discharges. All allowable non-stormwater discharges mentioned in Section 2.7 including a/c condensate, uncontaminated water line flushings, routing building washdown, pavement wash waters shall be directed to vegetated areas, a sediment basin or directed to the sanitary sewer system.
Installation Schedule:	During construction
Maintenance and Inspection:	**Inspect weekly.**
Responsible Staff:	Carlos Luhring

5.4 Washing of Applicators and Containers used for Paint, Concrete or Other Materials

BMP Description:	On-site applicators and containers washing. Discharge into surface water and/or storm water system resulting from washing of applicators and containers used for paint, concrete, or other materials is prohibited. **All vehicle concrete washouts will be performed off-site**. All applicators and containers used for paint, concrete or other materials used cleaned on-site shall direct wash water into a leak - proof container or leak - proof pit. The container or pit must be designed so that no overflows can occur due to inadequate sizing or precipitation. Washout/cleanout wastes shall not be dumped in storm sewers, liquid wastes will be disposed of properly per labeling indications and dispose of hardened concrete waste consistent with the handling of other construction wastes. Locate any washout or cleanout activities as far away as possible from surface waters and stormwater inlets or conveyances, and, to the extent practicable, designate areas to be used for these activities and conduct such activities only in these areas.
Installation Schedule:	During construction activity
Maintenance and Inspection:	**Areas shall be inspected at the end of each day**.
Responsible Staff:	Carlos Luhring

SECTION 6: POST-CONSTRUCTION BMPS

This section describes the post-construction storm water management measures that will be installed during the construction process to control pollutants in storm water discharges after construction operations have been completed. Post-construction BMPs for the Project will include permanent seeding and planting of vegetation of disturbed areas in the construction site per mitigation plan. These BMP's are further described in **Section 9 Final Stabilization**.

SECTION 7: INSPECTION, MAINTENANCE AND CORRECTIVE ACTION

All erosion and sediment control measures and other protective measures identified in this plan must be maintained in effective operating condition. To ensure BMPs are maintained in good working order at all times, regular inspections shall be conducted and findings of those inspections shall be documented in the SWPPP as required by the CGP.

7.1 Inspection Delegation of Authority

The signed Delegation of Authority is included in Appendix J.

The Delegation of Authority should identify the individual(s) or positions within the company who have been delegated authority to sign inspection reports.

7.2 Inspection Schedule and Procedures:

The Inspection Form is located in Appendix D.

Procedure:

Inspector shall perform an on-site inspection with a blank inspection report and maps in hand to be completed per the required inspection schedule identified below. Completed Inspection Reports shall be discussed on a weekly basis to ensure its proper completion. Any deficiencies, maintenance required or correction actions arising from the inspection will be discussed and followed up on until open items are addressed and properly closed per required in this section.

Inspection Schedule:

The CGP requires that *qualified personnel* provided by the Permittee or cooperatively by multiple Permittees, conduct inspections in accordance with the following schedules:

1. At least once **every 7 calendar days**; and

2. **Within 24 hours** of the occurrence of a storm event that produced 0.25 inches of precipitation or greater. (A properly maintained rain gauge on your site, or obtain the storm event information from a weather station representative of your location may be used.) For any day of rainfall during normal business hours you must record the total rainfall measured for that day in accordance with the CGP Part 4.

These schedules are a variation from regular inspection frequency because storm water discharges into impaired waters.

Qualified personnel: person knowledgeable in the principles and practice of erosion and sediment controls who possesses the skill to assess conditions at the construction site that could impact storm water quality and to assess the effectiveness of any sediment and erosion control measures selected to control the quality of storm water discharges from the construction activity.

Inspections are to be performed at a minimum in the following areas:

- All areas that have been cleared, graded, or excavated and that have not yet completed stabilization;
- All storm water controls (including pollution prevention measures) installed at the site to comply with this permit;
- Material, waste, borrow, or equipment storage and maintenance areas that are covered by this permit;
- All drainage structures where storm water typically flows within the site;
- All points of discharge from the site; and
- All locations where stabilization measures have been implemented.

Material storage areas and disturbed areas will be inspected for evidence of, or the potential for, pollutants entering the drainage system. The erosion and sedimentation control measures will be inspected to ensure that they are operating correctly. Where storm water discharge locations can be accessed, they will be inspected to determine if they are effective in preventing significant impacts to the receiving water. When discharge locations cannot be accessed, nearby downstream locations shall be inspected to the extent that such inspections are practicable. Vehicle construction entrances and exits will be inspected for evidence of off-site sediment tracking.

Based on the results of the inspection the SWPPP shall, within 7 calendar days, be modified as necessary to correct the problems identified. Modification or installation of additional BMPs shall be completed before the next anticipated storm event, if practicable, or otherwise as soon as practicable.

The results of all inspections and assessments will be documented in a report (Appendix D), a copy shall be provided to the Owner/Developer/Contractor within 24 hours of the inspection, and copies of the completed inspection checklists will be maintained with the SWPPP.

The inspection report to the Owner/Developer will contain the following:

- Inspection date, inspector information, including the names, titles, and qualifications of personnel conducting the inspection
- Weather information for the period since the last inspection (or for the first inspection since commencement of construction activity) including a best estimate of the beginning of each storm, its duration, approximate amount of rainfall for each storm (in inches), and whether any discharges occurred.
- Applicable rain gauge or weather station readings that triggered the inspection;
- If determined that it is unsafe to inspect a portion of the site, the reason it was found to be unsafe must be described and locations must be specified in the inspection report;
- Current weather information and a description of any discharges occurring at the time of the inspection
- Descriptions of evidence of previous or ongoing discharges of sediment or other pollutants from the site
- Location(s) of BMPs that need to be maintained
- Location(s) of BMPs that failed to operate as designed or proved inadequate for a location
- Location(s) where additional BMPs are needed but did not exist at the time of inspection
- Corrective action required, including any necessary changes to the SWPPP and implementation dates
- Reference to past corrective actions documenting follow-up actions taken
- Supplement inspection observations description with photos.

The inspection reports will be signed by an authorized individual of each Permittee and retained for a period of 3 years following the date the site is finally stabilized. Records shall be retained for a minimum of three years for the following items:

- Site inspections
- Compliance certifications
- Discharge reports
- Approved SWPPP document and amendments

The Permittee shall allow EPA, or an authorized representative of the EPA, to inspect the construction site, access and copy any records that must be kept under the conditions of the CGP, and sample or monitor for the purpose of ensuring compliance. The Permittee shall comply with any corrective actions required by EPA as a result of permit violations found during an inspection.

7.3 Maintenance of Controls

Maintenance activities shall be documented in the Inspection Report located in Appendix D.

The Contractor shall conduct maintenance of BMPs regularly and whenever an inspection (formal or informal) identifies a problem or potential issue. Maintenance on erosion and sediment controls should be performed as soon as site conditions allow. A record should be kept of all maintenance activities, including the date, BMP, location, and maintenance performed in your SWPPP.

All maintenance related to a storm event should be completed within a maximum of 48 hours of the storm event.

The following maintenance tasks should be performed on a regular basis:

- Litter, construction debris, and chemicals shall be prevented from exposure to storm water and from becoming a pollutant source. A daily walkover of the project site to identify exposure of potential pollutants to storm water shall be performed.
- All structural control measures receiving flows from areas that have not been permanently stabilized shall be inspected once each week.
- Built-up sediment shall be removed from barriers and sedimentation controls.
- Fiber rolls will be inspected for depth of sediment, tears or gaps between roll ties and gaps between the rolls and the ground surface, and to see if the rolls are securely attached to the posts. Posts will also be inspected to ensure that they are firmly set in the ground. Deteriorated fiber rolls shall be replaced as soon as the condition is discovered.
- Permanent seeding shall be inspected weekly during its period of establishment for bare spots and areas of insufficient germination or growth. Remedial action shall be taken to establish a stabilized surface in these areas once identified.
- Fertilizer applications shall be applied strictly in accordance with manufacturer's instructions.
- Temporary sediment traps shall be maintained in working order throughout the period of construction activity. Settled sediment and foreign debris shall be removed and properly disposed of as necessary.
- Accumulations of sediment that escapes to off-site areas must be removed at intervals to minimize off-site impacts. Sediment accumulations in public streets shall be removed as soon as possible and before any anticipated rain event. Vehicle tire mud cleaning devices shall be maintained to ensure their proper operation.

7.4 Corrective Action Log & Corrective Action Report

The corrective action log is included in Appendix E.

Personnel Responsible for Corrective Actions: See Section 1.0

Routine maintenance and repairs are generally not considered a corrective action triggering condition.

Corrective Action Reports are required when:

- A required stormwater control was never installed, was installed incorrectly or not in accordance with the requirements per CGP Parts 2 and/or 3.
- The stormwater controls installed and maintained are not effective enough for the discharge to meet applicable water quality standards or requirements in CGP Part 3.1.
- Clean up and properly disposition of spills, releases or other deposits.
- Remedy a permit violation.
- One of the prohibited discharges in Part 1.3 of the permit is occurring or has occurred.

Actions related to the findings of inspections should reference the specific inspection report.

Deadline for completing corrective actions:

- You must install a new or modified control and make it operational, or complete the repair, prevent, mitigate or clean up the spills or leaks**, by no later than 7 calendar days** from the time of discovery.

- **If it is infeasible** to complete the installation or repair within 7 calendar days, **you must document in your records why** it is infeasible to complete the installation or repair within the 7 calendar day timeframe and document your schedule for installing the stormwater control(s) and making it operational as soon as practicable after the 7-day timeframe.

  - A required stormwater control was never installed, was installed incorrectly, or not in accordance with the requirements in Parts 2 and/or 3; or

  - You become aware that the stormwater controls you have installed and are maintaining are not effective enough for the discharge to meet applicable water quality standards or applicable requirements in Part 3.1. In this case, you must notify your EPA Regional Office by the end of the next work day.

Deadline for documenting corrective actions in a report:

Within 24 hours of discovering the occurrence a Corrective Action triggering condition, you must document the following:

- The condition identified at the site;
- The nature of the condition identified; and
- The date and time of the condition identified and how it was identified.

Within 7 calendar days of discovering the triggering condition, you must document the following:

- Any follow-up actions taken to review the design, installation, and maintenance of stormwater controls, including the dates such actions occurred;
- A summary of stormwater control modifications taken or to be taken, schedule of activities necessary to implement the changes, and the date the modifications are completed or expected to be completed; and
- Conduct SWPPP modifications as a result of the condition identified or corrective action.

Each Corrective Action Report must be signed, certified, maintained in the SWPPP and provided to EPA except upon request. The reports must be retained for at least 3 years from the date of permit coverage expiration or termination.

SECTION 8: RECORD KEEPING AND TRAINING

8.1 Recordkeeping

Copies of the SWPPP, inspection records, all reports required by the permit, and records of all data used to complete the NOI to be covered by the permit should be kept for a period of at least 3 years from the date that permit coverage expires or is terminated.

Records should include:

- A copy of the SWPPP, with any modifications
- A copy of the NOI and Notice of Termination (NOT) and any storm water related correspondence with federal, state, and local regulatory authorities
- Inspection forms, including the date, place, and time of BMP inspections
- Names of inspector(s)
- The date, time, exact location, and a characterization of significant observations, including spills and leaks
- Records of any non-storm water discharges
- BMP maintenance and corrective actions taken at the site (Corrective Action Log)
- Any documentation and correspondence related to endangered species and historic preservation requirements
- Weather conditions (e.g., temperature, precipitation)
- Date(s) when major land disturbing (e.g. clearing, grading, and excavating) activities occur in an area
- Date(s) when construction activities are either temporarily or permanently ceased in an area
- Date(s) when an area is either temporarily or permanently stabilized.

8.2 SWPPP Modifications

The SWPPP Amendment Log Sheet is included in Appendix F.

1. Changes and updates to the SWPPP should be documented.
2. SWPPP modifications must be completed within 7 calendar days following any changes.
3. The records must include the name for the person authorizing each change and a brief summary.
4. Changes must be authorized by the designated personnel.
5. Any other operators impacted by the change must be notified immediately.
6. The log sheet shall be completed to comply with EPA requirements.
7. Any of the following conditions trigger a modification to the SWPPP and site maps:
    - New operators become active
    - Changes to construction plans
    - Changes or additions of stormwater control measures
    - Changes or additions of pollution control measures
    - Changes in response to corrective actions
    - Reflect on site map where operational control has been transferred and date of transfer
    - When inspections/investigations by officials determine SWPPP modifications are required for compliance. (include EPA inspection, modify SWPPP, document modification log)
    - If EPA determines additional requirements on discharge include the following in the SWPPP:
        - Copy of correspondence describing requirements by EPA
        - Description of stormwater control measures used to meet requirements
        - To reflect revisions to requirements (local, state, federal) that affect stormwater control measures implemented onsite
        - If applicable, changes in chemical systems or chemically enhanced water control.

8.3 Training

SWPPP Training Log is included in Appendix I.

Training is imperative to the success of the BMPs identified in the SWPPP. Adequate training is required if these BMPs are to be installed and maintained properly. These BMPs will fail if not properly installed and maintained. Thus, only trained personnel should be assigned these responsibilities. A construction storm water pollution prevention training program should be held for all construction personnel.

Basic training should include:

- Understand the requirements of the permit and the specific personnel responsibilities with respect to those requirements
- Spill prevention and cleanup measures, including the prohibition of dumping any material into storm drains or waterways
- An understanding of the basic purpose of storm water BMPs, including what they should look like, and how to avoid damaging them
- Potential penalties associated with storm water noncompliance.

At a minimum the Contractor directly responsible for implementing the SWPPP should receive comprehensive storm water training, including:

- Permit deadlines associated with installation, maintenance and removal of stormwater controls and with stabilization,
- The location, type of BMPs and how they are to be maintained,
- The installation and maintenance requirements and water quality purpose for each BMP,
- Proper procedures to follow with respect to the permit's pollution prevention requirements,
- Spill prevention and cleanup measures,
- Inspection and maintenance recordkeeping requirements,
- When and how to conduct inspections *(only for inspectors),* record applicable portions of the permit, most updated copy of SWPPP.

SECTION 9: FINAL STABILIZATION

The CGP requires that **stabilization measures be initiated** as soon as construction activities have ceased or will be inactive for 14 calendar days, and stabilization completed **within 7 calendar days.**

EPA define final stabilization as occurring when a uniform, evenly distributed perennial vegetative cover with a density of 70 percent of the native background cover has been established on all unpaved areas and areas not covered by permanent structures.

Native vegetation must be established uniformly over each disturbed area on the site. After a project or an area in the project has been fully stabilized, temporary sediment and erosion control devices (such as silt fences) can be removed. Once the site has been permanently stabilized, permit coverage can be terminated.

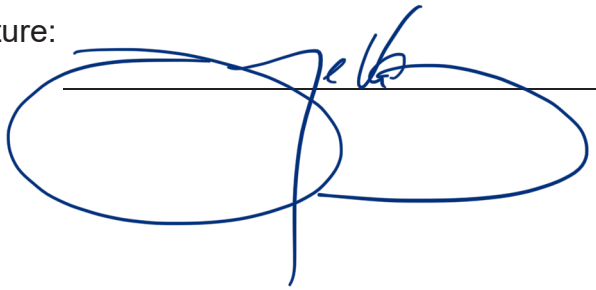
Permanent or final stabilization of the Project area will be accomplished by permanent seeding.

BMP Description:	Permanent Seeding and Planting. The permanent seeding and planting of vegetation, including but not limited to grass, trees, bushes and shrubs, will stabilize the soil by holding soil particles in place. Permanent seeding and planting shall be implemented to reestablish vegetated areas and landscapes to pre-construction conditions. Surfaces to be permanently seeded shall be properly prepared as a seeded bed and treated with fertilizer as appropriate. Seeded surfaces shall be compacted and mulched, and then watered and maintained until an adequate and permanent vegetative cover is established.
Installation Schedule:	Permanent seeding and planting shall be initiated in disturbed areas immediately after reaching final grade and stabilization activities shall be completed as soon as practicable, but no later than **7 calendar days** after its initiation.
Maintenance and Inspection:	Inspect seeded areas for failure and, if needed, reseed, replant and repair them as soon as possible.
Responsible Staff:	Carlos Luhring

SECTION 10: CERTIFICATION AND NOTIFICATION

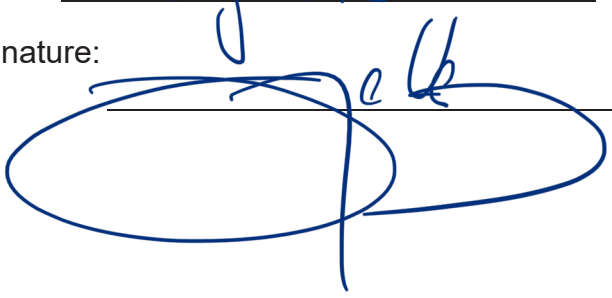
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name: Jorge Vaz Ramirez Title: President - Bellagio Corp

Signature:  Date: 7/21/2020

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name: Jorge Vaz Title: President

Signature:  Date: 7/21/21

SWPPP APPENDICES

Attach the following documentation to the SWPPP:

Appendix A - Site Maps

Appendix B – Copy of 2017 CGP

Appendix C – Copy of NOI and Acknowledgement Letter EPA/State

Appendix D – Copy of Inspection Reports

Appendix E – Corrective Action Log & Corrective Action Reports

Appendix F –SWPPP Amendment Log

Appendix G –Subcontractor Certifications/Agreements

Appendix H – Grading and Stabilization Activities and BMP Implementation Log

Appendix I –SWPPP Training Log

Appendix J –Delegation of Authority Form

Appendix K – Endangered Species Documentation

Appendix L – Historic Properties Documentation

Appendix M – Notice of Termination (NOT)

Appendix A - Site Maps

Appendix B – Copy of 2017 CGP

Appendix C – Copy of NOI and Acknowledgement Letter EPA/State

Appendix D – Copy of Inspection Reports

Appendix E – Corrective Action Log & Corrective Action Reports

APPENDIX E: Corrective Action Log

Project Name: Auroras Dream
SWPPP Contact: Xavier Cales

Inspection Date	Inspector Name(s)	Description of BMP Deficiency	Corrective Action Needed (including planned date/responsible person)	Date Action Taken/Responsible person
Jan. 22, 2021	Xavier Cales	Silt Fence down	Erect and repair damaged Silt Fence / Bellagio General Contractor	Jan. 23, 2021 / BGC
Feb. 24, 2021	Xavier Cales	Silt Fence down	Erect and repair damaged Silt Fence / Bellagio General Contractor	Feb. 24, 2021 / BGC
Mar. 22, 2021	Xavier Cales	Silt Fence down	Erect and repair damaged Silt Fence / Bellagio General Contractor	Mar. 22, 2021 / BGC
Mar. 31 2021	Xavier Cales	Erosion Control Blanket damaged	Fix damaged Erosion Control Blanket / Bellagio General Contractor	Mar. 31, 2021 / BGC
Apr. 28, 2021	Xavier Cales	Silt Fence down	Erect and repair damaged Silt Fence / Bellagio General Contractor	Apr. 28, 2021 / BGC
Apr. 28, 2021	Xavier Cales	Erosion Control Blanket damaged	Fix damaged Erosion Control Blanket / Bellagio General Contractor	Apr. 28, 2021 / BGC
Apr. 28, 2021	Xavier Cales	Straw Bale Dike replacement	Replace damaged Straw Bale Dike/ Bellagio General Contractor	Apr. 28, 2021 / BGC
Apr. 30, 2021	Xavier Cales	Sediment discharge on road after heavy storm event	Clean road sediment / Bellagio General Contractor	Apr. 30, 2021 / BGC
May. 7, 2021	Xavier Cales	Sediment Pit saturated	Clean sediment excess in sediment pit / Bellagio General Contractor	May. 7, 2021 / BGC

Appendix F –SWPPP Amendment Log

APPENDIX F: SWPPP Amendment Log

REVISIONS TO SWPPP MUST BE COMPLETED WITHIN 7 CALENDAR DAYS FOLLOWING THE OCCURANCE OF ANY CONDITIONS MENTIONED IN THIS SWPPP.

Project Name:
SWPPP Contact:

Amendment No.	Description of the Amendment	Date of Amendment (mm/dd/yyyy)	Amendment authorized by [Name(s) and Title]
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

Appendix G –Subcontractor Certifications/Agreements

APPENDIX G:
SUBCONTRACTOR CERTIFICATION
STORMWATER POLLUTION PREVENTION PLAN

Project Number: _____

Project Title: _____

Operator(s): _____

As a subcontractor, you are required to comply with the Stormwater Pollution Prevention Plan (SWPPP) for any work that you perform on-site. Any person or group who violates any condition of the SWPPP may be subject to substantial penalties or loss of contract. You are encouraged to advise each of your employees working on this project of the requirements of the SWPPP. A copy of the SWPPP is available for your review at the office trailer.

Each subcontractor engaged in activities at the construction site that could impact stormwater must be identified and sign the following certification statement:

I certify under the penalty of law that I have read and understand the terms and conditions of the SWPPP for the above designated project and agree to follow the practices described in the SWPPP.

This certification is hereby signed in reference to the above named project:

Company: _____

Address: _____

Telephone Number: _____

Type of construction service to be provided: _____

_____

_____

Signature: _____

Title: _____

Date: _____

Appendix H – Grading and Stabilization Activities and BMP Implementation Log

Appendix H –Grading and Stabilization Activities and BMP Implementation Log

Date Grading Activity Initiated	**Description of Grading Activity**	**Description of Stabilization Measure and Location**	**Date Grading Activity Ceased** (Indicate Temporary or Permanent)	**Date When Stabilization Measures Initiated**

Date BMP Installed	Description of Installed BMP	Description of BMP Location	Date Pollution Activity Began	Date Pollution Activity Ended (Temporarily or Permanently)

Appendix I –SWPPP Training Log

APPENDIX I - Stormwater Pollution Prevention Training Log

Project Name:

Project Location:

Instructor's Name(s):

Instructor's Title(s):

Course Location: _____ Date: _____

Course Length (hours): _____

Stormwater Training Topic: *(check as appropriate)*

- ❑ **Sediment and Erosion Controls**
- ❑ **Emergency Procedures**
- ❑ **Stabilization Controls**
- ❑ **Inspections/Corrective Actions**
- ❑ **Pollution Prevention Measures**

Specific Training Objective:_____

_____

Attendee Roster: *(attach additional pages as necessary)*

No.	Name of Attendee	Company
1		
2		
3		
4		
5		
6		
7		
8		

Appendix J –Delegation of Authority Form

Delegation of Authority

I, _____ (name), hereby designate the person or specifically described position below to be a duly authorized representative for the purpose of overseeing compliance with environmental requirements, including the Construction General Permit, at the _____ construction site. The designee is authorized to sign any reports, stormwater pollution prevention plans and all other documents required by the permit.

_____ (name of person or position)
_____ (company)
_____ (address)
_____ (city, state, zip)
_____ (phone)

By signing this authorization, I confirm that I meet the requirements to make such a designation as set forth in Appendix I of EPA's Construction General Permit (CGP), and that the designee above meets the definition of a "duly authorized representative" as set forth in Appendix I.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name: _____

Company: _____

Title: _____

Signature: _____

Date: _____

Appendix K – Endangered Species Documentation

Appendix L – Historic Properties Documentation

Appendix M – Notice of Termination (NOT)

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